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Return-Path: glowbugs@theporch.com
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Date: Wed, 20 Mar 1996 19:43:22 -0600 (CST)
Message-Id: <199603210143.TAA09310@uro.theporch.com>
Errors-To: ws4s@midtenn.net
Reply-To: glowbugs@theporch.com
Originator: glowbugs@theporch.com
Sender: glowbugs@theporch.com
Precedence: bulk
From: glowbugs@theporch.com
To: Multiple recipients of list <glowbugs@theporch.com>
Subject: GLOWBUGS digest 136
X-Listprocessor-Version: 6.0c -- ListProcessor by Anastasios Kotsikonas
X-Comment: Please send list server requests to listproc@theporch.com
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GLOWBUGS Digest 136

Topics covered in this issue include:

- 1) Re: Glowbuggite/Boatanchorite 3579.545 funzies
by rdkeys@csemail.cropsci.ncsu.edu
- 2) Re: Design of Globuggite single tube type MOPA set
by dsibie@hvsag01.ns-nl.att.com
- 3) Re: Design of Globuggite single tube type MOPA set
by rdkeys@csemail.cropsci.ncsu.edu
- 4) Re: Design of Globuggite single tube type MOPA set
by Conard Murray <cfm@tntech.edu>
- 5) fs: EF Johnson Pacemaker
by robert fowle <hammarlund@voyager.net>
- 6) HB TX using one tube type
by owens@stout.atd.ucar.edu (Chip Owens)
- 7) Tube Testers revisited
by MAB@delphi.com
- 8) Fire Bottles are back in production on the good ol' USofA
by MAB@delphi.com

Date: Wed, 20 Mar 1996 11:29:50 -0500 (EST)
From: rdkeys@csemail.cropsci.ncsu.edu
To: 70401.134@compuserve.com (Sandy Blaize)
Cc: rdkeys@csemail.cropsci.ncsu.edu (), glowbugs@theporch.com
Subject: Re: Glowbuggite/Boatanchorite 3579.545 funzies
Message-ID: <9603201629.AA101884@csemail.cropsci.ncsu.edu>

>
> I'm looking at the Hartley in this month's "ER". I was thinking of
> using a 10 or something with a bit more "balls". Wonder what tubes are
> "eligible" under the 1929 contest rules for the SEO's?

Basically the original type tubes were:

7.5 watters: '10, 50, 801

50 watters: 211, 850, 860 (although any 50 watter bottle will work
there are a bunch of other usable numbers)

250 watters: 204, 849, 861, 833 (833 did not arrive until 1937).

There were a few larger sizes in use, but not commonly available anymore.

A 204 or 849 makes a fine rig for a lightly loaded 100 watts, or more.

> Anybody tried a pair of
> '27's in parallel?

Good for maybe 5 watts max.

> Maybe even a 211 Hartley? It would be nice to get something
> that would run about 100 watts or so input, maybe get 25-30 or so out?

I would run one at 50 watts input and 25 watts out, for best thermal
stability on 80. On 160, let her rip!

Mine gets out about 15 watts, and I am happy with that. More == squirrely

> I got my TV burst rock mounted inside the FT-243 holder after a
> little work with the Dremel tool! Will show up tonight, QRN permitting!
> 7025 would be great for a showup frequency!
> 73
>
> Sandy W5TVW
> ZUT

Great! 73/ZUT DE NA4G/Bob UP

Date: Wed, 20 Mar 1996 17:00:28 +0100
From: dsibie@hvsag01.ns-nl.att.com
To: glowbugs@theporch.com
Subject: Re: Design of Globuggite single tube type MOPA set

Message-ID: <9603201600.AA01550@hvtstg2.ns-nl.att.com>

Bob,

Your proposal sounds very interesting, alas are 6146 unknown in this part of the world. Can european tubes be used instead? And which one?

Maybe it is possible to build the proposed rig in incremental stages, so the inexperienced builder can build along with the design.

Or should everybody experiment for his/her own and mail the results to the group?

What are MOPA or MOIPAPA designs? If this should be common knowledge please forgive me for bringing it up.

72 de Dirk, PA3GNR

Date: Wed, 20 Mar 1996 11:55:53 -0500 (EST)

From: rdkeys@csemail.cropsci.ncsu.edu

To: dsibie@hvsag01.ns-nl.att.com

Cc: rdkeys@csemail.cropsci.ncsu.edu (), glowbugs@theporch.com

Subject: Re: Design of Globuggite single tube type MOPA set

Message-ID: <9603201655.AA101931@csemail.cropsci.ncsu.edu>

>

> Bob,

>

> Your proposal sounds very interesting, alas are 6146 unknown in this part
> of the world. Can european tubes be used instead? And which one?

I chose the 6146 because it was used in a great many ham rigs of the 50's through the end of the tube era, for finals, and there should be bunches of them around. Also, there should be Euro numbers for them. I don't know what they are right off, but ask anyone with a kenwood hybrid rig that uses 12BY7 drivers and 6146 finals. They could probably tell you.

I am sure there is an 807 rough equivalent in the Euro types. I know the Russians used a very similar type to an 807, and maybe Svetlana still makes them. I forget the number right off, but have seen them before. The British had a number for it also, if my memory is not foggy.

The design is such that anything should work relatively well.

Any octal such as a 6V6, or a 6AG7, or a 6DQ6, etc., or any mini tube such as an 6AQ5, 6BQ5, and many others, would work just fine.

Any beam power tube should work, although a real RF pentode with better isolation between the grids would work best for the oscillator.

For the amplifiers, it really does not matter.

World War surplus 829's and 832's would work well, paralleled or one section as oscillator and the other as amplifier.

There are many possibilities that should work quite well.

> Maybe it is possible to build the proposed rig in incremental stages,
> so the inexperienced builder can build along with the design.

Sure, that is the best way. Build the oscillator first, and use it as a simple 5 watt rig with maybe 300 volts on the plate and 150 on the screen --- qrp set for sure. Then build the plate amplifier and use it for 160 or 80. Then add the intermediate stage for doubling to 40.

Each stage could be built on a breadboard or on a small cabinet so that the stages could be stacked as modules --- modularity! That was very popular in the 30's, designwise, until proper rack mount systems came into common use.

> Or should everybody experiment for his/her own and mail the results to
> the group?

That is the purpose of the group --- discuss/build/operate/rediscuss/rebuild, etc..... Operating is an important part of the fun.

The purpose of the posting was to stimulate discussion and to see if anyone had any common ideas for a good generic, easily retubed, project rig.

It should even be possible to add plate modulation to the final stage quite easily and run AM or CW, all using the same basic tube type, whether it is a US or Euro type. Let yer junk box or commonly available shelf stock dictate what you can do.

> What are MOPA or MOIPAPA designs? If this should be common knowledge
> please forgive me for bringing it up.

No problem. I was, perhaps, in it a little deep for some. For purposes of historical and design consideration.....

Classification of early radio rigs by stages:

1 stage --- Master Oscillator transmitter

2 stages --- Master Oscillator Plate Amplifier transmitter (MOPA)

3 stages or more --- Master Oscillator, Intermediate Plate Amplifier,
Plate Amplifier (MOIPAPA).

The terminology hails from early military designators dating from WWI. Hams used it after about 1924, when Lt. Rives published his famous article in the 1924 QST. Such ``complicated'' rigs were not very common until maybe 1929 or so, when folks began to 1) chase crystal oscillators in lieu of standard self-controlled oscillators, 2) wanted more power than the trusty self-controlled oscillators would put out, and 3) could AFFORD the guildern de realme for tubes that cost a month's wages..... The military used the designations until long after WWII, especially in the Navy.

> 72 de Dirk, PA3GNR

73/ZUT DE NA4G/Bob UP

Date: Wed, 20 Mar 1996 10:53:12 +0800
From: Conard Murray <cfm@tntech.edu>
To: "rdkeys@csemail.cropsci.ncsu.edu" <rdkeys@csemail.cropsci.ncsu.edu>
Cc: Multiple recipients of list <glowbugs@theporch.com>
Subject: Re: Design of Globuggite single tube type MOPA set
Message-ID: <01I2K4Z58GK292096N@tntech.edu>

-- [From: Conard Murray * EMC.Ver #2.5.02] --

In a recent post, Bob said....
"I chose the 6146 because it was used in a great many ham rigs of the 50's through the end of the tube era"
what, are we admitting defeat so early? ;^)

The VT may not be as popular as it once was, but as long as we are still around, the tube era is still alive!

73 and ZUT! de Conard ws4s

Date: Wed, 20 Mar 1996 12:00:47 -0500 (EST)
From: robert fowle <hammarlund@voyager.net>
To: boatanchors@theporch.com
Cc: glowbugs@theporch.com
Subject: fs: EF Johnson Pacemaker
Message-ID: <199603201700.MAA05202@vixa.voyager.net>

well gang, i did deal yesterday, and this is one of the excess piece's. I'm not into Johnson, (yet anyways) anyway it has to find a home.

preferably pick-up, but, thats not always possible, i know.
asking for the best deal i can get, plus shipping (if needed)
there are no 'extra' holes, 4 of the little white 'things' on the knobs are
missing.

so, if your interested..... drop me a line

=====]-[->

Robert Fowle

The HAMMARLUND Historian

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1215 Winifred

Jackson, Mich. 49202-1946

E-mail at: hammarlund@vixa.voyager.net

HAMMARLUND LITERETURE WANTED

=====]-[->

Date: Wed, 20 Mar 1996 13:43:36 -0700 (MST)
From: owens@stout.atd.ucar.edu (Chip Owens)
To: glowbugs@theporch.com
Subject: HB TX using one tube type
Message-ID: <199603202043.NAA24221@atd.atd.ucar.EDU>

Hi Gang,

The ARRL mobile handbook has many simple tube rig articles.
One in particular uses all type 5763 tubes in a osc/buffer/PA setup.
If I remember correctly, this article was by Vernon Chambers. I
don't remember what year this was, but think it must have been from
the 1950's. The same volume shows lots of variations on the theme
of a simple crystal controlled transmitter, but most/many use the 6AG7
6146 marriage of firebottles. Look for a copy of the ARRL mobile
handbook at the next hamfest.

Chip Owens, NW00
owens@stout.atd.ucar.edu

Date: Wed, 20 Mar 1996 20:26:58 -0500 (EST)
From: MAB@delphi.com
To: glowbugs@theporch.com
Subject: Tube Testers revisited
Message-ID: <01I2K0ZAU3MM9AQIYN@delphi.com>

Hello, BA and GB gang. This is a delayed response (life in the hi-tech fast lane!) to an earlier thread regarding tube testers. There's been a lot of debate here (and elsewhere) about the relative merits of emission versus true mutual conductance testers. There is a third category of tester, however, often called "dynamic conductance", which is more than an emission tester and less than a mutual conductance tester, and which is worthy of consideration. The particular unit I have in mind (and which I've used for the last 25 years) is the Eico Model 667.

This type of tester (or, at least, the 667), in addition to providing all the standard tests for leakage, shorts, and gas, provides a composite merit test that accounts for cathode emission, static (DC) ability of the grid to control plate current, and plate resistance, all at a plate current appropriate to the type of tube being tested. A variety of voltages are available that can be separately supplied to the plate and screen of the tube under test. The test performed is not a true AC mutual conductance test, but it does provide a useful figure of merit for the tube being tested. It also provides for separate testing of each section of multi-section tubes.

I particularly like the Eico 667 because of the large variety of sockets provided (5 & 7 pin nuvistor, novar, compactron, 7, 9, & 10 pin miniature, 7 inline submini pins, 8 circular submini pins, octal, and loctal) and because the owner's manual provides detailed instructions for developing settings for tubes not covered in the roll chart (or in any of the supplemental settings manuals). (I also like it 'cause I'm the original owner and built it from a kit!). 22 filament voltages are available, and (no flames please) a transistor tester is built in.

So, a Hickok it's not, but, if you see one in good shape for an affordable price at a swap, do give it a second look. I don't think you'll be disappointed. And, that's my 2 cents worth. 73, Mike

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%
% Michael A. Burke, Synetics Consultants
% PO Box 439, 11 Scenic Dr, Westminster, MA 01473
% 508-874-0908 mab@delphi.com
%
% With apologies to Will Rogers, "I never met a
% vacuum tube I didn't like" (well, almost never).
%
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Date: Wed, 20 Mar 1996 20:32:56 -0500 (EST)
From: MAB@delphi.com
To: glowbugs@theporch.com
Subject: Fire Bottles are back in production on the good ol' USofA
Message-ID: <01I2KP6H4B2095QDVY@delphi.com>

I guess it had to happen, what with the prices of audio type tubes being driven into the stratosphere by the glass audio crowd (a large portion of which lives in Japan), namely, a former American tube manufacturer is back in production, and, they are (drum roll please), "The Phone Company"! (I can't help but think of the movie, "The President's Analyst" everytime I hear Ma Bell refered to as "The Phone Company" - a must see movie if you haven't).

Western Electric has been able to restore the original tooling and to find key (former and current) employees to restore audio power tube production at their Kansas City works. The first tube type being cranked out is the WE 300B, a power triode. This tube was selling for \$125 wholesale when Western Electric made their last production run in 1988. The suggested list price for the current production is \$350 (each!). Other types planned for future production include the WE 274B duo diode rectifier and the WE 212E.

I picked this info up in the May 1995 issue of "Vacuum Tube Valley", a magazine which, along with "Glass Audio", (and despite the general lunacy of the glass audio crowd) provides a lot of interesting reading and lots of pictures of pretty audio BAs (no flames please, they really are pretty and nice to look at!). Of course, the equipment prices are something else. New production audio BAs introduced at the Winter 1996 CES in Las Vegas include (1) the Marantz T-1 50W Power Amp : \$25,000 (no, that's not a typo), (2) three new WAVAC stereo single-ended power amps at \$12,000, \$22,500, and \$45,000 each, and (3) the Sunlight Engineering Sunharts MK II speaker, \$36,000/pair).

I think I'm in the wrong business (computers)! 73, Mike

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% Michael A. Burke, Synetics Consultants
% PO Box 439, 11 Scenic Dr, Westminster, MA 01473
% 508-874-0908 mab@delphi.com
%
% With apologies to Will Rogers, "I never met a
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End of GLOWBUGS Digest 136
